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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,698	07/10/2001	Richard R. Dickson	00-714	6169
719	7590	03/22/2004	EXAMINER	
CATERPILLAR INC. 100 N.E. ADAMS STREET PATENT DEPT. PEORIA, IL 616296490			FAYYAZ, NASHMIYA SAQIB	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/905,698	DICKSON ET AL.
	Examiner Nashmiya S. Fayyaz	Art Unit 2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 28 October 2003.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) \_\_\_\_\_ is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-13, it is unclear if simply the "transient dilution control arrangement" is being claimed or its combination with the gas sampling system. Further, it is unclear from claim 1 where the "transient...arrangement" fits into the gas sampling system i.e. is it between the tunnel and first mass flow controller? Further, input lacks clear antecedent basis. Also, claim 3 appears to be repetitive of claim 1 last 2 lines. In claim 5, how are any of these features related to those of claims 1-4? In claim 8, "said critical flow venturi" lacks antecedent basis. In claim 9, "the flow of intake air" on line 2 lacks antecedent basis. In claim 10, on line 2, "said laminar flow element" lacks antecedent basis. In claim 12, it is unclear what "input" is being referred to on lines 2 and 3.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2856

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Ullman et al. – U.S. Patent #6,016,711.

As to claims 1-3 and 9, as best understood, Ullman et al. disclose a mobile emissions sampling system, which includes a transient dilution air control arrangement as depicted in Fig. 2 which includes parallel paths flowing through baseline valve 123 and valve 121 which is adjusted by processing unit 110 to control the actual sampling rate so as to produce a constant mass flow stream and a variable mass flow stream to create a single flow to a conduit i.e. a “partial flow dilution tunnel”, see figs. 1 and 2.

Note the intended usage clause regarding the sampling system has not been afforded the effect of a distinguishing limitation as the body of the claim fails to draw life or breadth from the preamble. As to claim 2, note critical flow venturi 147 “serially” connected with valve 121. As to claim 3, note fig. 2, showing parallel relationship. As to claim 9, note MAF 111 which measures air intake rate.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

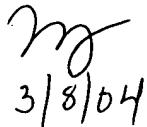
Claims 4-8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ullman et al.

As to claims 4-8, Ullman et al. fail to disclose a "dome loaded" regulating valve. However, dome loaded valves are known pressure regulated valves. Therefore, inclusion of a dome loaded valve is considered to have been a matter of design choice to one of ordinary skill in the art at the time of the invention as a known mode of regulating a valve which is required by Ullman et al. Also, note MAF 2.

As to claim 5-8, processing unit 110 is only depicted schematically and lacks the circuitry connections to the device. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that a voltage to pressure controller would be involved with a pressure regulating valve to control the valves and provide pressure outputs for control and receive electrical inputs for processing measurements taken. As to claims 10-13 as best understood, pressure sensor 151 provides pressure measurements to processing unit 110 to calculate a dilution rate which is adjusted via regulator 143.

6. Please note, although a statement for information disclosure is present, a 1449 is not found.

7. Any inquiry concerning this communication should be directed to Nashmiya S Fayyaz at telephone number (571)272-2192.



3/8/04

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